REMARKS

Claims 1-10 are all the claims pending in the application. No claim is amended, canceled or added.

Reconsideration of the application is respectfully requested.

Claims 1-3 and 5-10 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Takeuchi et al. (JP 2001-216965; "Takeuchi"). Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al. (JP 2001-216965; "Takeuchi").

Claims 1-3, 5 and 7-10 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamahira et al. (JP 2001-266,876; "Yamahira"). Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamahira et al. (JP 2001-266,876; "Yamahira").

Claims 1, 2 and 7-10 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Takeuchi et al. (JP 2002-222,648; "Takeuchi '648"), Watanabe et al. (JP 10-321,224; "Watanabe"), or Nakano et al. (JP 2003-17,055; "Nakano"). Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Takeuchi et al. (JP 2002-222,648; "Takeuchi '648"), Watanabe et al. (JP 10-321,224; "Watanabe"), or Nakano et al. (JP 2003-17,055; "Nakano").

Applicants respectfully traverse the above rejections.

Specifically, independent claim 1 recites a nonaqueous electrolyte secondary battery comprises a positive electrode including particles of lithium-containing layered nickel oxide represented by a general formula $Li_a Ni_x Co_y Al_z M_b O_2$, wherein $0.3 \leq a \leq 1.05$, $0.7 \leq x \leq 0.87$,

$0.1 \leq y \leq 0.27$, $0.03 \leq z \leq 0.1$, $0 \leq b \leq 0.1$; M is at least one selected from metallic elements except Ni, Co and Al. Independent claim 1 further recites that in binding energy of oxygen 1s spectrum when measuring said particles by XPS, if a peak area appearing at 529eV is set to D; a peak area appearing at 531eV is set to E; oxygen concentration ratio is set to $D/(D+E)$; and oxygen concentration ratios at depths of L1 nm and L2 nm from the particle surface are respectively set to α_{L1} and α_{L2}, a combination of L1 and L2 in which $(\alpha_{L2} - \alpha_{L1})/\alpha_{L2} \leq 0.1$, $L1 \leq 100$, $L2 \geq 500$ is present.

The Office asserts that the cited references, Takeuchi, Yamahira, Takeuchi '648, Watanabe and Nakano, all disclose a battery with a non-aqueous electrolyte and a cathode active material that meets the general formula $Li_a Ni_x Co_y Al_z M_b O_2$, wherein $0.3 \leq a \leq 1.05$, $0.7 \leq x \leq 0.87$, $0.1 \leq y \leq 0.27$, $0.03 \leq z \leq 0.1$, $0 \leq b \leq 0.1$; M is at least one selected from metallic elements except Ni, Co and Al, as recited in claim 1.

The Office acknowledges that none of the cited reference expressly discloses the oxygen binding energy or concentration ratios, as recited in claim 1. However, it appears that it is the Office's position that the composition of the active material according to the present invention is the same as the active materials disclosed in the cited references. The Office then concludes that any properties, such as oxygen binding energy or concentration ratios as recited in claim 1, would have been *inherently* disclosed by all of the cited references. Applicants respectfully disagree.

Applicants submit that, contrary to the Office's assertion, the active materials of the cited references do not inherently possess the property of in binding energy of oxygen 1s spectrum when measuring said particles by XPS, if a peak area appearing at 529eV is set to D; a peak area appearing at 531eV is set to E; oxygen concentration ratio is set to $D/(D+E)$; and oxygen

concentration ratios at depths of L1 nm and L2 nm from the particle surface are respectively set to α_{L1} and α_{L2}, a combination of L1 and L2 in which $(\alpha_{L2}-\alpha_{L1})/\alpha_{L2} \leq 0.1$, $L1 \leq 100$, $L2 \geq 500$ is present, as recited in claim 1.

Specifically, Applicants submit an Appendix I to show that active materials having the same composition can be converted to active materials having different characteristics (active material Y and active material Z of the Appendix I) by a treatment subsequent to the process of calcination and synthesis ("post treatment").

As shown in Appendix I, calcination is conducted under given conditions to synthesize an active material X having a specified composition (active material X as described in the attached Appendix I). Thereafter, the active material X is subjected to a post treatment under specified conditions. As described in the Example of Appendix I, a post treatment under specified post treatment conditions ("post treatment condition A" described in the Appendix I) can produce the active material having a desirable surface state according to the present invention (active material Y described in the Appendix I).

In contrast, as shown in the Comparative Example of Appendix I, when a post treatment is conducted, for example, in atmosphere ("post treatment condition B" described in the Appendix I), an active material having an undesirable surface state (active material Z described in the attached Appendix I) is produced.

It was clarified by the present inventors for the first time that active materials X, Y and Z are present and have the relationship as shown in Appendix I. The active material Y is distinguished from active material Z. Applicants respectfully submit that active materials having the same composition may not necessarily possess the same characteristics.

Contrary to the Office's assertion, the active materials of the cited references, Takeuchi, Yamahira, Takeuchi '648, Watanabe and Nakano, do <u>not necessarily</u> possess the property of in binding energy of oxygen 1s spectrum when measuring said particles by XPS, if a peak area appearing at 529eV is set to D; a peak area appearing at 531eV is set to E; oxygen concentration ratio is set to D/(D+E); and oxygen concentration ratios at depths of L1 nm and L2 nm from the particle surface are respectively set to α_{L1} and α_{L2}, a combination of L1 and L2 in which $(\alpha_{L2} - \alpha_{L1})/\alpha_{L2} \leq 0.1$, $L1 \leq 100$, $L2 \geq 500$ is present, as recited in claim 1.

The fact that a certain result or characteristic <u>may</u> occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic <u>necessarily</u> flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

Applicants respectfully submit that the Office fails to establish that the materials of the cited references do necessarily possess the recited characteristics of the claims of the instant application and thus the rejections are not sustainable.

Claims 2-10 depend, directly or indirectly, from independent claim 1. As such, claims 2-10 are patentable over the cited references at least for the same reasons as claim 1.

In view of the above, it is respectfully submitted that the present claims are patentable over Takeuchi, Yamahira, Takeuchi '648, Watanabe and Nakano, either alone or in combination, and withdrawal of the foregoing rejections under 35 U.S.C. § 102 and §103 is requested.

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be

best resolved through a personal or telephone interview, the Examiner is kindly requested to

contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880.   Please also credit any

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Respectfully submitted,

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Appendix I

- JP2001-216965 (calcination)
- JP2001-266876 (Calcination)
- JP2002-222648 (Calcination)
- JP10-321224 (Calcination)
- JP2003-17055 (Calcination)

Calcination of precursor in oxygen atmosphere

Active material X having composition of Li, Ni, Co, Al, M and O

Post treatment (Ex. pulverization)

Post treatment condition B <COMPARATIVE EXAMPLE>

Active material Z having composition of Li, Ni, Co, Al, M and O (surface state bad)

Binding energy / eV

Post treatment condition A <EXAMPLE>

Active material Y having composition of Li, Ni, Co, Al, M and O (surface state good)

Binding energy / eV